PATHFINDER

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An informal newsletter to the GPS User Community produced by Army Product Manager, GPS, Fort Monmouth, NJ. Information presented is based on published and submitted GPS news items of interest to the general user. Widest dissemination and reproduction is encouraged and newsworthy items are solicited for inclusion. Editor Mr. Don Mulligan at PM, GPS, Fort Monmouth NJ.

The PATHFINDER can be found online at: http://army-gps.robins.af.mil

PM's Corner:

Hello GPS Users!
The President recently announced the decision to stop degrading the GPS signal accuracy. What does this mean for you as a military user?

First, the rationale for eliminating the intentional degradation of the GPS signal is to improve the accuracy available to civil users. This benefits many commercial GPS applications, including air, road, marine and rail navigation, telecommunications and emergency responses. Note that these are all peacetime activities.

Second and more important to the military user, the President's statement made clear that the Department of Defense retains the ability to selectively deny GPS signals on a regional basis when our national security is threatened. This means it is more critical than ever that military users only operate with PPS-rated receivers capable of operating under intentional signal degradation and other forms of hostile signal interference.

So while the President's policy change improves the efficiency of commercial GPS, it does not mean that military users can now buy commercial GPS. Your operational readiness depends on having PPS-rated military GPS receivers that will perform under hostile conditions!

The focus of this issue is PLGR installation. While the PLGR was developed to meet the need for handheld GPS, it also serves in many installed applications, providing GPS data to other weapons systems. Be careful, an improper installation can damage the PLGR or the computer it is connected to. If you have installed or plan to install PLGR, review the information in this newsletter. For help with this or any GPS-related issue, I invite you to contact us at any of the locations listed at the back of this newsletter.

LTC George Eveland

FRIED CABLES

Olga Lawrence and Johnny Walker

This is what can happen when you hook up external power to your PLGR the WRONG way, routing both leads of the external power cable to the same battery. For the RIGHT way, see the articles discussing PLGR installation in this issue.

Q: SHOULD WE REQUISITION A REPLACEMENT FOR A FAULTY PLGR?

For Army and USAF users the answer is no[1]. PLGR repair is an example of *Streamlined Logistics* meaning a faulty PLGR goes directly to the vendor repair center instead of to an Army depot. This routing saves time and it also means that most users do not have to requisition a replacement since the vendor will ship one to you from an exchange pool maintained at the repair center. For many Army users, there is an additional element of field support: Many Direct Support Units (DSU) operate local PLGR exchange pools. In this case, you can swap a faulty PLGR for a good one at your DSU. The DSU then exchanges the faulty PLGR with the vendor to restore stock at the DSU. Because of the exchange pool process, you do not have to requisition a replacement. This system has worked well over the last six years. The only problem occurred last summer when a surge in monthly returns triggered by field reprogramming inspections depleted the exchange pools. We hope to soon get back to a Turn-Around-Time (TAT) of five days from when a PLGR arrives at the repair center until a replacement is on its way.

[1] USN customers route PLGR repairs through their service supply depot

Q: ANY TIPS FOR RETURNING A PLGR FOR REPAIR?

This is how NOT to return PLGR for repair. Due to poor packing, warranty coverage was denied and the Army was billed for the cost of all repairs.

The procedure for PLGR repair has not changed! Whether the fault is covered by the warranty or resulted from abuse or accidental damage or even if your PLGR has an expired warranty date. Treat all PLGR requiring repair the same:

Remove the main power battery (e.g. the BA-5800 or battery holder with AA cells).

Leave the lithium 3.6 volt "AA" size memory battery installed to preserve fault codes.

Package the PLGR to protect it from in-transit damage.

Provide Essential Information: Use a DD Form 1149 to identify your unit Point of Contact, a commercial phone number and a complete return shipment address including building number. As always, provide your DODAAC too!

Specify a failure mode or write a note to explain what you think is wrong with the PLGR (see box on next page). Any information you can provide will help!

Ship it by traceable means to the Rockwell Collins Repair Center:

DODAAC EZ7415
ROCKWELL COLLINS INC
ATTN: SERVICE CENTER, MS 139-141
855 35TH STREET NE
CEDAR RAPIDS, IA 52402-3613
Mark For: AN/PSN-11 Warranty

If you think your replacement PLGR is overdue, provide your unit info and PLGR serial numbers to the Fort Monmouth, NJ PM GPS office for a status check.

Some things NOT to do: Don't remove the memory battery, don't return the accessories and don't send a PLGR (no matter what condition) to the DRMO office for disposal!

NOTE: Failure Modes can speed the repair process, here are the most common. If one of them describes the problem you are having, use it! If not, please provide a written explanation and avoid the use of generic terms like "PLGR inop"!

• Will not turn on/blank screen • Damaged display • Damaged (other than display-specify) • Will not run on external power • Will not run on battery power • Reprogramming failed	• Self-test failed (include failure message) • Data port failed • Will not accept crypto fill • Will not track satellites • Memory battery cover stuck

Olga Lawrence and Johnny Walker

IT S NOT A BILL!

When Rockwell Collins returns a repaired PLGR, the DD Form 1149 Requisition and Invoice – Shipping Document lists the serial numbers and shipment address. It also cites a dollar value for use by the carrier to determine the value of transit insurance. Some Army units have interpreted this as a repair bill and hesitate to sign and return a copy to confirm receipt. Relax, the DD Form 1149 is NOT a bill, the dollar value is there for insurance purposes only!

Olga Lawrence and Johnny Walker

GOT DISPOSITION?

In supply talk, disposition means "what to do" with something when a unit is deactivated and the equipment is designated as "excess." The supporting Force Integration Office (FIO) gets first dibs on what to do with excess equipment. If other units within the command or installation are short the same item, he can transfer the stock to them. If there is no local need, the FIO reports the stock as "excess" and requests disposition instructions from the Major Command or Army item manager. Another way items become excess is when equipment authorizations change under a new Modified Table of Organization and Equipment (MTOE) or Table of Distribution and Allowances (TDA). Again, the FIO checks to see if he can cross level any "excess" items to other local units; if not, he requests disposition from the Major Command or the Army item manager.

How does this affect PLGR? There are not enough PLGR to meet the total Army requirement. Therefore the Army does not have any "excess" PLGRs even though some may appear so at a particular unit or installation. The challenge is to move "excess" PLGRs to fill shortages elsewhere. When the FIO or Major Command cannot use excess PLGRs, they contact the Army item manager at CECOM, Mr. Joe Aliamo at DSN 992-9209, CML (732) 532-9209, Email: Alaimoj@mail1.monmouth.army.mil.

Note 1: DO NOT send "excess" PLGR to DRMO disposal office or Rockwell Collins!

Note 2: PLGR is a joint service item with the USAF listed as the Primary Item Control Activity (PICA). That does not affect the guidance that Army units should request PLGR disposition instructions from the Army Item Manager, not the USAF Item Manager!

Dennis Rotenberry at Ft Monmouth

PROBLEM WITH YOUR COMSEC ACCOUNT?

Army Units: If you have a problem receiving your crypto-variable key for GPS receivers, contact the Communication Security Logistics Agency (CSLA) at Fort Huachuca, AZ at (520) 538-7560. CSLA now operates an on-line request and verification process for getting new COMSEC keys! If you provide your unit identification, COMSEC account number and quantity of PLGRs being supported, the folks at CSLA will help you. Email requests can be sent to limonr@csla.army.mil.

Contractors: If your work requires GPS COMSEC keys, you can also resolve problems by contacting the CSLA at the number given above. In addition to your COMSEC account number, you'll need to identify the contract you are working on, the expiration date of the contract, and provide a copy of your DD254 Facility Clearance. CSLA will check it out and coordinate delivery of keys.

Most COMSEC Group Unique Variable (GUV) keys are good for 12 months so they are usually replaced annually. If your PLGR indicates "Check GUV issue number," first check with your local COMSEC custodian to see if you have the current COMSEC key. For help with a COMSEC-related issue, review Appendix C of the PLGR TM 11-5825-291-13 or contact the CSLA at the above number.

USAF: Air Force customers must address their requests to US Space Command Petersen Air Force Base, Attn: J60 via autodin message or contact MSgt Grier at USSpc/j6ok@petersen.af.mil.

Raul Simon at CSLA

Q: OUR PLGR HAVE BEEN IN STORAGE FOR A WHILE. HOW DO WE GET THEM READY FOR A HAND-HELD MISSION?

PLGR that have been in storage (more than a few weeks) will need a "fresh" load of satellite information known as almanac data. You may also find some BA-5800 batteries need to "wake up" if they've been in storage due to a condition called "passivated battery" (see note 1 below).

Insert the main power battery, turn the PLGR on by pressing the "ON" key. Watch the display to see if the automatic built-in-test reports any faults. If the PLGR does not turn on, see note 1 below. You may now load a COMSEC crypto-variable key or wait to do so until after the almanac is loaded. Procedures for loading a key are described in PLGR TM beginning at paragraph 3.6.5. (Change 2 to the TM has the latest changes to the procedure). You can tell if a key is already loaded by pressing the PLGR "MENU" key until you see a screen which has "DATA-XFR" on the top line. If the word "CRYPTO" is on the bottom line, a key has been loaded. If the bottom line is blank, you do not have a key.

The PLGR will automatically download a new almanac while tracking the satellites. This takes about 15 minutes (see note 2 below). Go outside so the PLGR has an unobstructed view of the sky. Press the "MENU" key until you see "STATUS" on the first line. Press the right arrow key until the word "SETUP" is flashing. Press the down arrow key once and then right arrow until the word "FIX" is flashing. Press the down arrow until this changes to "CONT" which is short for continuous. Press left arrow until you see up/down triangles next to "P" in bottom right corner of screen. Now press the "POS" key until you see a screen with "TRACK/SEARCH" on the first line. When the bottom line reads "ALM AGE: 1 DAY" you have finished downloading the almanac and your PLGR is ready for use. If you now receive a "Check GUV issue number," your COMSEC key has expired and you should contact your COMSEC custodian for the new one.

NOTE 1: Passivated Battery. That's when a chemical film forms over the internal battery contacts due to non-use. When this happens,

your PLGR will not turn on even though the battery is still good. How to fix it? Repeatedly press the ON button! This is usually enough to break through the film and restore an electrical circuit.

NOTE 2: Downloading Almanac. The PLGR needs 12 ½ minutes of continuous contact with the same satellite to download current almanac data. Any satellite will do but this is why an unobstructed view is needed - to prevent a break in contact during the download.

Michael Wilkin at Fort Monmouth

Q: WE FINISHED PLGR REPROGRAMMING. WHAT SHOULD WE DO WITH THE REPROGRAMMING KITS?

The hardware components were assigned stock numbers:

PLGR Reprogramming Cable
NSN 6150-01-382-1551
PLGR AC Power Adapter
NSN 6130-01-396-4211

These items should be retained since they will be needed for future PLGR software updates. This is not because PLGR software goes bad but because PLGR contains a table of MAGVAR values which eventually have to be updated. MAGVAR is the natural deviation from true North that occurs over time. PLGR contains a table of conversion factors used to compensate for this variation and these values need updating about once every 5 years. Another reason for updating PLGR software is to correct errors detected in the current software. By retaining your reprogramming hardware you will be ready to upload software changes when they are released. If you have a problem with storing these items, turn them in to your installation MWO coordinator for safekeeping.

Olga Lawrence at Fort Monmouth

PLGR INSTALLATION DISCLAIMER

When PLGR was fielded, PM GPS provided common accessories that facilitated installation to the broad range of host platforms but PM GPS has never produced PLGR installation kits for any specific vehicle. Host platform managers are responsible for designing PLGR installations for their vehicles.

INSTALLING PLGR
(Part 1: The Mounting Plate)

The introduction of new battlefield systems such as Force XXI Battle Command Brigade and Below (FBCB2) often require connection to PLGR to obtain GPS positioning data. For most vehicles, proper PLGR installations begin with the mounting plate which holds the plastic PLGR mount. New High Mobility Multi-purpose Wheeled Vehicles (HMMWV) come with a PLGR mounting plate already installed. For previously fielded HMMWVs, you can obtain one of two drawing sets developed by PM Light Tactical Vehicle (PM LTV) for installing PLGR. These drawings cover most variations of HMMWV design. If you can't get them through technical publication channels, contact PM GPS and we will provide them in hard copy or electronic media:

For M1114: Order installation instructions, PLGR accessory kit 57K3242.

For M966, M966A1, M1025, M1025A1, M1025A2, M1026, M1026A1 and M1036: Order installation instructions, PLGR accessory kit 57K3233.

These plate designs may be useful for other vehicles as well. If you need guidance or assistance with installing PLGR to a vehicle, try the host platform manager or give us a call at the Technical Management Division (TMD).

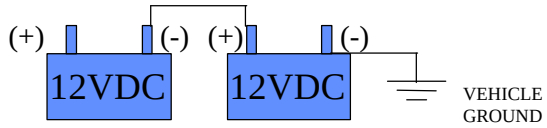
Michael Wilkin at RMD

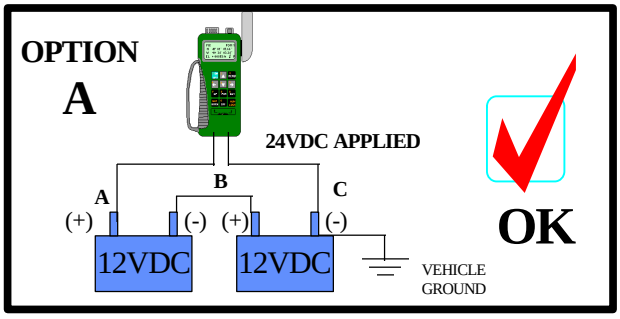
INSTALLING PLGR
(Part 2: The Power Connection)

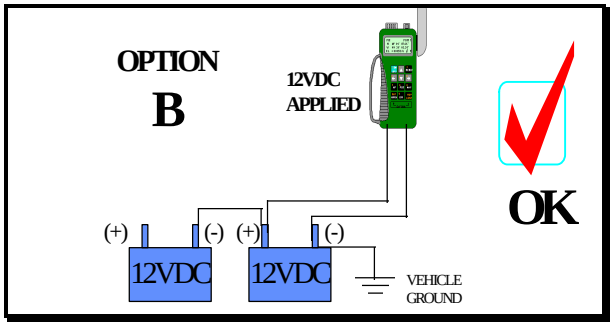
The proper connection for external power is critical when installing a PLGR.

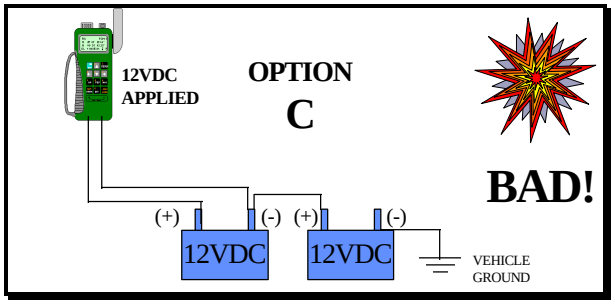
1. The PLGR can be installed to any host vehicle using 9 to 32 volt DC (VDC) power. Take care not to reverse polarity when wiring the cable to the vehicle power source. The wire with the in-line fuse is always the positive or "hot" wire. Reversing the wires may damage your PLGR and blow the in-line fuse.

2. Most military vehicles with more than one battery have them connected in series. The PLGR ground MUST be the same as the vehicle ground! Simply put, the PLGR grounding wires must be attached to the same battery post as the ground cable that comes from the vehicle to the battery. Attach the grounding wire to the battery post and not to the vehicle body for grounding. Not following these instructions can result in a hardware failure inside the PLGR that will cause the 3.6 VDC memory battery to receive a charge from the host vehicle battery and explode if the memory battery cap touches a grounded metal object while attached to vehicle power.









Michael Wilkin at Fort Monmouth

INSTALLING PLGR
(part 3: Verifying PLGR Connections)

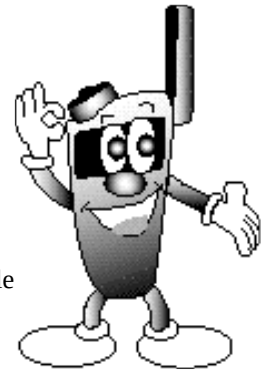
Now that you have the mounting plate installed, here is a "Cheat Sheet" to guide you through the rest of the PLGR installation. NOTE: This outline was written for the FBCB2 system but much of the guidance applies to any PLGR installation. **DO NOT** leave a BA-5800 battery installed to your PLGR before or during connection to a source of external power!

PLGR Connect Procedure:

1. Attach ground strap (from FBCB2)
2. Connect Serial port cable
3. Connect Remote Antenna cable
4. Connect power cable
5. Install PLGR in mount

Disconnect Procedure:

1. Remove PLGR from mount
2. Disconnect power cable
3. Disconnect Remote Antenna cable
4. Disconnect Serial port cable
5. Detach ground strap



Verify Proper PLGR operation:

If PLGR position does not update or appears to be incorrect check the following:

1) **FOM** – check FOM in upper right corner of PLGR screen – should read FOM 1 or FOM 2 (A PLGR will take 12 ½ minutes continuous tracking of one satellite to download all satellite almanac data although an accurate position fix is usually obtained in a shorter length of time.)

2) **Satellite track** –

   a) Press PLGR "Menu" key until first menu screen is displayed (fig 1).

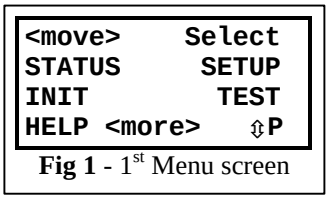


Fig 1 - 1st Menu screen

   b) Press left or right arrow until "STATUS" is selected (flashing)

   c) Press down arrow 4 times to display satellite track screen (Fig 2). Second line (CN) will show a signal to noise ratio for any satellite being tracked; if this line is all zeroes, PLGR is unable to track satellites.

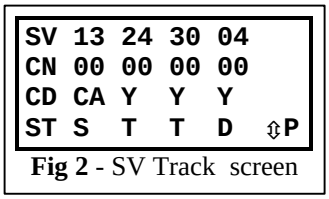


Fig 2 - SV Track screen

3) **Power/Antenna Connections (when your installation is using them)** – Verify as follows:

   a) Press PLGR "Menu" key until first menu screen is displayed (fig 1).

   b) Press left or right arrow until "STATUS" is selected (flashing)

   c) Press Up arrow once to display Status Screen #1 (Fig 3)

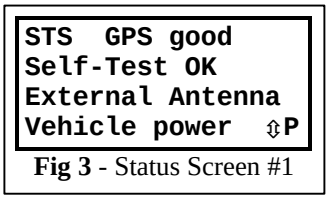


Fig 3 - Status Screen #1

   d) Third line should read "External Antenna." If it says "Internal Antenna." check for the following failures:
      i) Remote antenna connection loose at PLGR
      ii) Loose connection at antenna end
      iii) Remote antenna bad.

   e) Fourth line should read "Vehicle power." If it reads "Battery power."* check for the following failures:
      i) Loose power connection at PLGR end of power cable
      ii) Loose connection at vehicle end of power cable
      iii) Blown power fuse
      iv) Damaged power cable

* The AA battery tray may be used in a PLGR connected to external power but the larger BA-5800 must never be used in a PLGR connected to external power.

4) **Crypto Keys** - Press PLGR "Menu" key until second menu screen is displayed (Fig 4).

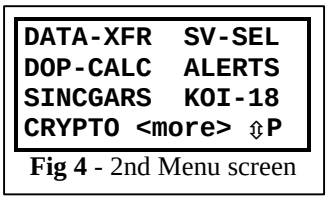


Fig 4 - 2nd Menu screen

If "CRYPTO" is visible at lower left, the PLGR has been keyed.

Verify Serial Connection (if connected to another device):

1) **On PLGR** – Check serial connection as follows:

   a) Press PLGR "Menu" key until first menu screen is displayed (fig 1).

   b) Press down arrow three times to display I/O status page (fig 5)

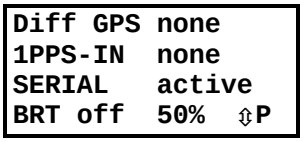


Fig 5 - I/O Status Screen

   c) Third line should read "SERIAL active," If it reads "SERIAL none," PLGR is not receiving data from the connected device (e.g. FBCB2 or other mission computer).

2) **On The Other System** – Check with that system sponsor to learn how to verify it is properly receiving GPS data from the PLGR.

(Note: Thanks to recent exercises at Fort Hood, a specific list of procedures to check your PLGR to FBCB2 system serial connection is available from PM GPS or FBCB2 offices)

Battery Notes:

1) **Prime power batteries (BA-5800):** Before you connect PLGR to external power source, be sure to REMOVE the prime power battery. If you leave a BA-5800 battery installed when you connect PLGR to vehicle power you run the risk of a battery explosion.

2) **Memory batteries (LS-14500):** LEAVE the LS-14500 memory battery in your PLGR when connecting to external power. The memory battery is rated at 3.6 volts. It retains crypto keys, waypoints, last known position and satellite data in PLGR memory when the PLGR is off and external power is disconnected. When the PLGR displays "Warning: Memory battery low," it is time for a new memory battery. **NOTE**: Always use a 3.6V LS-14500 replacement. Standard Alkaline 1.5V "AA" size batteries are the same size and shape but they don't provide sufficient voltage to retain PLGR memory. If you recently replaced your PLGR memory battery and the memory battery warning still shows, check to make sure you are using a 3.6V LS-14500 battery and it is properly seated in the memory battery chamber. **NOTE:** If you have no main battery or external power connected to PLGR when you replace the memory battery, you will lose your crpto-key and any user-entered data. **NOTE**: The LS-14500 replaced the LS-6 battery which is no longer manufactured.

INSTALLING PLGR
(Part 4: The PLGR External Power Cable)

This information relates to external power connections for PLGR.

There have been slight variations in the external power cable, NSN 6150-01-375-8661, since fielding began in 1993 and all are considered acceptable. Here are three variations: First, on some cables the center conductor (hot) on the connector is flush instead of being recessed. If the conductor makes metal-to-metal contact it can short out against the chassis ground. Second, the connector has no positive locking mechanism and can work loose in a vehicle with heavy vibrations. This can be fixed by using a cable with a different NSN that features a newell nut to make a positive connection (see photo). However, if you are using the SINCGARS ground plate around the connectors to reduce GPS interference with SINCGARS, the plate may not leave enough exposed thread for the newell nut to grasp (see note on SINCGAR below). Third, the markings of the positive and ground wires are not always clear. On some cables, the ground wire is color coded red, which some mechanics interpret to be positive. Others have a thin, white line running the length of the positive line. Carefully trace the line with the fuse to identify the positive wire!

"The tip of this power cable has the newell nut connector which makes a positive locking connection to the PLGR - good when you are installing PLGR to a vehicle with a lot of vibration."

Since the variations discussed above all carry the same NSN, (except the newell nut version) they can't be segregated and you have to work with what you have or get in response to a requisition.

The Georgia Field Office is coordinating with the Defense Logistics Agency (DLA) for corrective action. DLA is in the process of procuring an improved version of the PLGR external power cable under NSN 6150-01-375-8661. This cable will have a recessed center conductor to reduce accidental shorting and proper color-coding (red for positive and black for ground).

DLA considered including the newell nut connector but since it is not always needed and would increase cost substantially, it won't be included. If you need a cable with the newell nut connector, DLA is currently procuring them under NSN 6150-01-469-6066. Stock should be available in six months to a year.

Whichever version you use, consider some of these field expedient measures: a piece of electrical or friction tape as a protective flap on the end of the power cable to keep the positive wire from making metal contact if you remove PLGR from the vehicle, a piece of tape or velcro across the back of the connectors to hold them firmly against the PLGR, a piece of high density foam or other non-metallic material to compress between the PLGR mount and the back of the PLGR to hold connectors firmly against the PLGR.

Note on SINCGARS: In some vehicles with both PLGR and SINCGARS, it has been found that a grounding plate on the PLGR can reduce GPS interference and increase the range of SINCGARS data transmissions. The plate is only effective in certain applications and it must be locally-fabricated. Do you need one? Check with PM TRCS at DSN 987-3027.

Chuck Pocher and Johnny Walker.

INSTALLING PLGR
(Part 5: External Power Problems)

You've installed PLGR but now you have a problem with the PLGR turning on or not turning on upon application of power. What is going on?

Assuming you have current software (version -003 or -008) and you DO NOT have a main power battery installed.

1. If the PLGR has no memory battery installed or if the memory battery is non-functional, the PLGR will turn on automatically every time external power is applied.
2. If the PLGR has a functional memory battery and was in an operating mode when the power was cut, the PLGR will turn on automatically when external power is restored.
3. If the PLGR has a functional memory battery and was explicitly commanded to Turn Off through either the keypad or by remote control through the serial interface before power is removed, the PLGR will remain off when power is restored.
4. If the memory battery is weak but not completely "dead," the PLGR may behave as in 1 or 2 above!

NOTE 1: If your PLGR was connected to external power, the only time a PLGR does not turn on automatically upon restoration of external power is when the PLGR has been explicitly turned off and has a functioning memory battery.

NOTE 2: If your PLGR is operating on internal main power battery, it will always require a command to be turned on no matter how it was turned off.

NOTE 3: Some PLGRs are integrated to a weapons system and mounted in a remote location. These PLGRs can be turned on remotely by a command from the host system through the serial interface. This is an unusual installation design for PLGR, but if you want to know more about it, contact the TMD office at DSN 833-2712.

Chuck Pocher at TMD

Update ON PLGR WARRANTY SUPPORT

The AN/PSN-11 PLGR was procured with a six-year warranty. The warranty expiration date is marked on each PLGR warranty data plate.

The government is finalizing negotiations for four-year warranty extensions on PLGR. Until these extensions are in place, failed PLGRs with an expired warranty will be repaired under the warranty exclusion clause. How does this affect your repair procedure? It doesn't. Continue to turn in your PLGRs for repair as always. If the warranty has expired, CECOM will fund the repair as a warranty exclusion. You will not be charged unless a determination is made that the failure resulted from intentional abuse.

The only impact to you is the Turn-Around-Time (TAT). If a PLGR is covered under warranty, the contractor is required to ship a replacement within five days. If it is not covered under warranty, the contractor has 60 days to repair it as a warranty exclusion. Normally, you would not even see this difference because there are pools of spare PLGRs at the repair center for both warranty and exclusion repair. Unfortunately, the pools were zeroed out due to a rush of repairs last year and it will be a few months until our repair cycles are back to the normal TAT.

Johnny Walker at GFO

UPDATE ON THE DAGR PROGRAM

There is tremendous interest in the Defense Advanced GPS Receiver (DAGR) program, the new handheld GPS receiver. By the time the DAGR begins to enter Army service in FY03, it will no doubt have many product improvements over the current PLGR design. (The service life of PLGR is expected to extend well into the next decade). PM GPS staff at the Joint Program Office is now conducting a study of alternative receiver designs with varying features. The study will allow us to select the best possible design for DAGR.

Maj Lisa Kirkpatrick at TMD

DETECT AND CORRECT SERIAL DATA PORT FAILURE

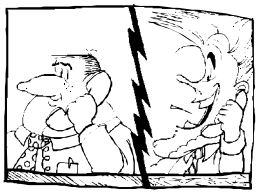
During last year's PLGR reprogramming effort it was discovered that the serial port in some PLGRs was defective. Routine PLGR Built-In-Test does not detect all serial port faults. Do you need the serial port to function correctly? Yes, if you are connected to another system. And yes, even if you only use PLGR in handheld mode, you still need the serial port to load new software.

Details: the PLGR actually has two serial ports - one is an RS-232 type (like the COM port on your PC), and the other is RS-422 (a more robust type used for longer distances and higher reliability). Both are present on the PLGR's J2 serial port jack. The RS-232 port is the one used for reprogramming. Since some systems (such as FBCB2) use the RS-422 port for communicating with PLGR, they may experience problems even if the PLGR was successfully reprogrammed.

So how do you know if your serial port works? The Georgia Field Office (GFO) has designed two simple testing devices (one for each port). You can build one. The information is available at the GPS website at http://army-gps.robins.af.mil/tech/serial-test.htm, or request an email copy from frank.rowe@robins.af.mil. If you don't have internet access, call or fax the GFO to request the drawing on how to make a serial port tester.

If your PLGR serial port is faulty, send the PLGR in for repair!

F*rank Rowe at GFO*



How to Contact PM GPS

For Field Assistance

There is a GPS help line at all three PM GPS locations.

For PM GPS and the Technical Management Division (TMD) at Los Angeles, CA
Call (310) 363-0595 or DSN 833-0595.
E-mail: *del.crane@LOSANGELES.AF.MIL*
Or Chuck Pocher at DSN 833-2712

For the Georgia Field Office (GFO) at Warner-Robins, GA
Call (478) 926-3288 or DSN 468-3288.
E-mail: johnny.walker@ROBINS.AF.MIL
Or Frank Rowe at DSN 468-9511

For the Readiness Management Division (RMD) at Fort Monmouth, NJ
Call (732) 532-4733 or DSN 992-4733.
E-mail: james.buggy@mail1.monmouth.army.mil
Or Michael Wilkin at DSN 922-6131

Who to Call?

For technology including host platform integrations,
SAASM, or new GPS receivers
Call TMD

For software support, supply support, distance learning,
technical pubs and accessory procurement
Call GFO

For fielding, equipment authorizations, New Equipment Training,
maintenance support and host vehicle installations
Call RMD

Mr. Willie Jackson (center), an equipment specialist from the Georgia Field Office, is providing field support to units at Fort Hood. Willie was joined on field support duty by PM GPS staff from the California and New Jersey offices.

PATHFINDER

PM GPS
Attn: AMSEL-DSA-GPS-R
Squier Hall
Fort Monmouth, NJ 07703

ACCT #89